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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,821	06/11/2001	Gregory A. Fish	GC-122.3-US-U1	3464

7590 07/08/2004

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EXAMINER
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LANDAU, MATTHEW C

ART UNIT	PAPER NUMBER
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2815

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/879,821

**Applicant(s)**

FISH ET AL.

**Examiner**

Matthew Landau

**Art Unit**

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 11, 12 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 11, 12 and 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 11, 12, and 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claim 1, the limitation “sampled grating portions having a first grating phase” renders the claim indefinite. It is unclear what is meant by “phase” of a grating and how the phase of a grating is determined. The instant application refers to a “phase of the grating”. However, Applicant does not explicitly define this terminology, or what it means in terms of structure. In other words, it is unclear exactly what structural features of the grating are defined by the “phase” of that grating. Does the period of the grating portion determine the phase? Is it number of teeth in a particular grating portion? Is it the height or width of the teeth? If Applicant contends that this terminology is well known in the art, appropriate references (in the form of patents, publications, or text books) should be provided that clearly define this limitation in terms of structure. Note claims 2, 17, and 1 have similar problems.

Further regarding claim 2, since it is unclear what determines grating phase, it is unclear what is meant by one phase being opposite to another phase. While it is acknowledged that Figure 6 of the instant application (lower right portion) shows a negative phase and a positive phase, Applicant does not disclose what structural characteristic a grating must have to obtain these phases. Note claim 19 has similar problems.

***Claim Rejections - 35 USC § 102***

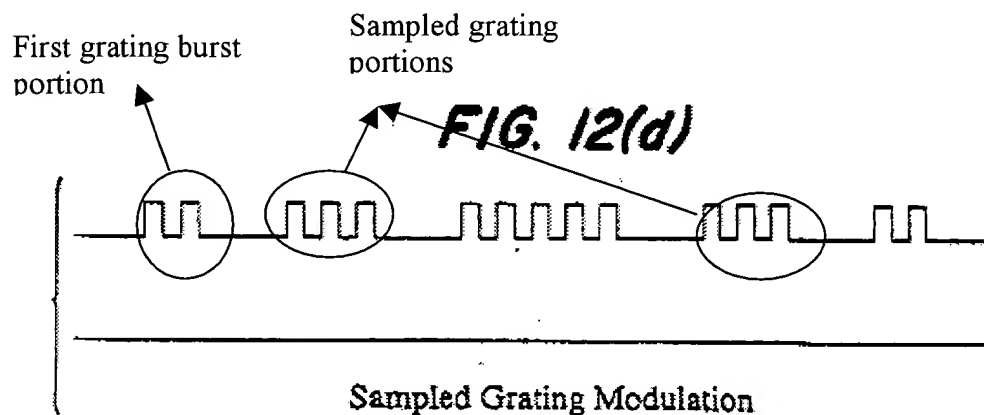
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 12, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Little et al. (US Pat. 5,668,900, hereinafter Little).

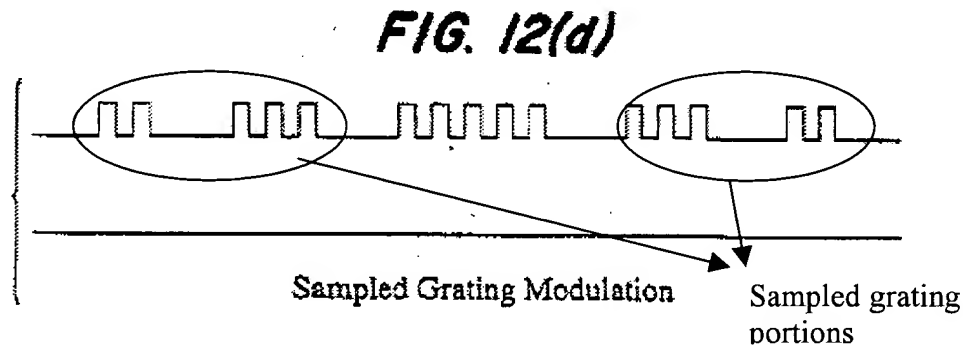
In regards to claim 1, as best the examiner can ascertain the claimed invention, Figure 12d of Little (shown below) discloses a reflector comprising: a sampled grating including a plurality of sampled grating portions comprising a first grating phase separated from each other by portions with no grating; and a first grating burst portion at a beginning of a first one of the sampled grating portions having a second grating phase, wherein the second grating phase is different from the first grating phase. It is considered that since the grating in the first grating portion has more teeth than that of the sampled grating portions, it has a different phase. This interpretation appears to be consistent with Applicant's disclosure shown in Figure 6.



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In regards to claim 12, Figure 12d of Little discloses the first grating burst portion is spaced apart from the first one of the sampled grating portion by a spacing with no grating.

In regards to claim 17, as best the examiner can ascertain the claimed invention, Figure 12d of Little (shown below) discloses a reflector comprising: a sampled grating including a plurality of sampled grating portions separated from each other by portions with no grating; wherein the sampled grating portions each have a first grating phase and a second structural phase. 9Since each sampled grating portion includes a grating with two teeth and a grating with three teeth, it is considered that each sampled grating portion has a first phase and a second phase.



***Allowable Subject Matter***

Claims 2, 3, 11, 18, and 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### *Response to Arguments*

Applicant's arguments filed April 9, 2004 have been fully considered but they are not persuasive.

Regarding the 112, 2<sup>nd</sup> paragraph rejection, Applicant's statement "the term 'grating phase' is well known in the art as the relative location of the physical (or structural) grating features (i.e., the location of the grating "teeth")" is not understood. The location of the teeth compared to what? While the page submitted by Applicant does makes a brief mention of the phrase "grating phase", no explanation is given as to what that phrase means in terms of structure. Applicant's statement in conjunction with the provided reference are not sufficient to overcome the 112, 2<sup>nd</sup> paragraph rejection set forth above. None of the questions posed by the Examiner have been answered and Applicant has not defined what the limitation "grating phase" means in terms of structure. Therefore, the rejection is maintained.

Regarding the rejection over Little, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Landau whose telephone number is (571) 272-1731.

The examiner can normally be reached from 8:30 AM - 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
TOM THOMAS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

Matthew C. Landau

Examiner

July 2, 2004